



EMERALD COAST UTILITIES AUTHORITY

# 2017 WATER QUALITY REPORT



We're very pleased to provide you with this year's Annual water Quality Report. We want to keep you informed about the excellent water and services we have delivered to you over the past year. Our goal is and always has been, to provide to you a safe and dependable supply of drinking water.



## Where Does Drinking Water Come From?

The sources of drinking water for both tap water and bottled water throughout our country include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material. It also can pick up substances resulting from the presence of animals or from human activity.

### Contaminants that may be present in source water include:

- Microbial contaminants such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
- Inorganic contaminants such as salts and metals, which can be naturally occurring, or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
- Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
- Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.



ECUA routinely monitors your drinking water according to Federal and State laws, rules and regulations, generally more frequently than the law prescribes.

In order to ensure the safety of tap water, EPA prescribes regulations that limit the amount of certain contaminants in water provided by public water systems. FDA (Food & Drug Administration) regulations establish limits for contaminants in bottled water, which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that the water poses a health risk.

ECUA has 28 active wells distributed throughout its service area that pump water from the Sand-and-Gravel Aquifer. In general, ECUA customers receive water from the wells (two to five) located closest to their residence. Each well is considered a separate treatment plant, where water quality parameters are adjusted to maximize operational efficiencies and to comply with regulatory standards.

Granular Activated Carbon (GAC) filters are installed on twelve (12) wells for iron or organic contamination removal. Calcium Hydroxide (lime) is added for pH adjustment; Phosphoric Acid is added for corrosion control in the distribution system and home plumbing; and Chlorine is added for disinfection. Fluoride is added at select wells and helps prevent tooth decay.

The Sand-and-Gravel Aquifer is a high-quality, prolific source of water for our community. Because it does not have a confining layer above it, virtually everything that falls on the ground has



the potential to affect the quality of our water supply.

ECUA is well aware of this threat to the groundwater and over the years has worked with Escambia County and the City of Pensacola in strengthening their Wellhead Protection Ordinances.

ECUA monitors your drinking water for total coliform bacteria on a regular basis. Total coliform bacteria are generally not harmful themselves, are naturally present in the environment, and are used as an indicator that other bacteria may be present. This is a process that we take very seriously and implement carefully each month.

In 2017, the Florida Department of Environmental Protection (FDEP) performed a Source Water Assessment on our water. Assessments are conducted to provide information about any potential sources of contamination in the vicinity of our wells. There are 41 potential sources of contamination identified for this system, with a low to moderate susceptibility level. The assessment results are available on the FDEP Source Water Assessment and Protection Program (SWAPP) website at [www.dep.state.fl.us/swapp](http://www.dep.state.fl.us/swapp) or they can be obtained by calling the ECUA's Water Quality Division at (850) 969-6689.

More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's (EPA) Safe Drinking Water Hotline at (800) 426-4791.





## DEFINITIONS

We've provided the following definitions to help you better understand certain terms and abbreviations with which you might not be familiar.

**Action Level (AL):** The concentration of a contaminant which if exceeded, triggers treatment or other requirements that a water system must follow.

**Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

**Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.

**Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.



**Not Detected (ND):** Means not detected and indicates that the substance was not found by laboratory analysis.

**Parts per million (ppm) or Milligrams per liter (mg/l):** One part per million corresponds to one minute in two years or a single penny in \$10,000.

**Parts per billion (ppb) or Micrograms per liter (µg/l):** One part per billion corresponds to one minute in 2,000 years, or a single penny in \$10,000,000.

**Picocuries per liter (pCi/L):** Picocuries per liter is a measure of the radioactivity in water, a quadrillionth of a curie per liter.

# 2017 Drinking Water Quality System-Wide Test Results Table

The System-Wide Test Results table, included in this report, presents the results of compliance monitoring for the period of January 1 through December 31, 2017. As authorized and approved by EPA, the State has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Some of our data, though representative, is more than one year old.

RADIOLOGICAL CONTAMINANTS							
Contaminant and unit of measurement	Sampling Dates (mo/yr)	MCL Violation	Level Detected	Range of Results	MCLG	MCL	Likely source of contamination
Alpha (pCi/l)	7/14 - 9/17	No	7.1	0.19 - 7.1	0	15	Erosion of natural deposits
Radium 226+228 (pCi/l)	7/14 - 9/17	No	5.2	0.96 - 5.2	0	5	Erosion of natural deposits
INORGANIC CONTAMINANTS							
Barium (ppm)	June & July 17	No	0.056	0.0092 - 0.056	2	2	Discharge of drilling wastes; discharge from metal refineries; erosion of natural deposits
Fluoride (ppm)	June & July 17	No	0.8	ND - 0.8	4	4.0	Erosion of natural deposits; discharge from fertilizer & aluminum factories. Water additive which promotes strong teeth when at optimum level of 0.7ppm
Mercury (ppb)	June & July 17	No	0.1	ND - 0.1	2	2	Erosion from natural deposits; discharge from refineries and factories; runoff from landfills; runoff from cropland
Nickel (ppb)	June & July 17	No	1.1	ND - 1.1	n/a	100	Pollution from mining and refining operations. Natural occurrence in soil
Nitrate (as Nitrogen) (ppm)	June & July 17	No	4.2	ND - 4.2	10	10	Runoff from fertilizer use; leaching from septic tanks, sewage; erosion of natural deposits
Sodium (ppm)	June & July 17	No	9.3	2.7 - 9.3	n/a	160	Saltwater intrusion, leaching from soil

VOLATILE ORGANIC CONTAMINANTS							
Contaminant and unit of measurement	Sampling Dates (mo/yr)	MCL Violation	Level Detected	Range of Results	MCLG	MCL	Likely source of contamination
1,1-Dichloroethylene (ppb)	Jan-Dec 17	No	0.67 avg.	ND - 0.8	4	4	Water additive used to control microbes
Tetrachloroethylene (ppb)	Jan-Dec 17	No	0.92 avg.	ND - 0.73	0	3	Discharge from factories and drycleaners
Trichloroethylene (ppb)	Jan-Dec 17	No	0.63 avg.	ND - 0.68	0	3	Discharge from metal degreasing sites and other factories



If you have any questions about this report or concerning your water utility, please contact The ECUA Laboratory Manager at 969-6689. We encourage our valued customers to be informed about their water utility. ECUA Board and Committee meetings are held in the boardroom of the ECUA Administration Building, 9255 Sturdevant St., Pensacola, FL 32514. For a complete schedule of meetings, please contact the Executive Assistant, Ms. Sharon T. Harrell, at (850) 969-3300, or visit us on-line at [www.ecua.fl.gov](http://www.ecua.fl.gov). The ECUA Water Quality Report for 2018 will be published by July 1, 2019.

# 2017 Drinking Water Quality System-Wide Test Results Table

STAGE 1 & 2 DISINFECTANTS AND DISINFECTION BY-PRODUCTS							
Disinfectant or Contaminant and Unit of Measurement	Dates of Sampling	MCL or MRDL Violation	Level Detected	Range of Results	MCLG (MRDLG)	MCL or (MRDL)	Likely source of contamination
Chlorine (ppm)	Jan-Dec 17	No	0.79 avg.	0.72 - 0.89	(4)	4.0 MRDL	Water additive used to control microbes
Haloacetic Acids 5 (ppb)	Jan-Dec 17	No	0.77 avg.	0.46 - 0.98	n/a	MCL/60	By-products of drinking water disinfection
Total Trihalomethanes (ppb)	Jan-Dec 17	No	7.08 avg.	4.06 - 8.5	n/a	MCL/80	By-products of drinking water disinfection
LEAD AND COPPER (TAP WATER)							
Contaminant and unit of measurement	Dates of sampling	AL Violation Y/N	90th percentile	No. of sites exceeding the AL	MCLG	AL	Likely source of contamination
Copper (tap water) (ppm)	July-Sept 17	No	0.25	0 of 52	1.3	1.3	Corrosion of household plumbing systems; erosion of natural deposits; leaching from wood preservatives

## 2017 Table of System-Wide Averages

Concentration shown in table below is the average of 2017 sampling results for ECUA’s entire water system.

Volatile Organic Contaminants (VOC)	Regulatory MCL	Averaged Concentration
1,1- Dichloroethylene (ppb)	7	0.046
Tetrachloroethylene (ppb)	3	0.025
Trichloroethylene (ppb)	3	0.032

Inorganic Contaminants	Regulatory MCL	Averaged Concentration
Barium (ppm)	2	0.028
Fluoride (ppm)	4	0.49
Mercury (ppb)	2	0.009
Nickel (ppb)	100	0.043
Nitrate (as Nitrogen) (ppm)	10	1.57
Sodium (ppm)	160	4.88

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly persons, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC (Centers for Disease Control) guidelines on appropriate means to lessen the risk of infection by cryptosporidium and other microbiological contaminants are available from the Safe Drinking Water Hotline at 1-800-426-4791.



## What are Precautionary Boil Water Notices and Why Do We Issue Them?

Occasionally, drinking water distribution systems experience disruptions caused by main breaks or planned maintenance, and when a loss of pressure may have occurred, require the issuing of a Precautionary Boil Water Notice, (PBWN). The PBWN does not mean that contamination is present, but is merely a precautionary measure until bacteriological sampling confirms that no contamination exists. ECUA makes every effort possible to keep our customers informed as to the quality of our water. The status of all PBWNs can be obtained any time of day by visiting [www.ecua.fl.gov](http://www.ecua.fl.gov), calling the ECUA SCADA at (850) 969-3343. Customers may also opt-in to the ECUA Notification System by going through the registration process through a link located on the homepage of the ECUA website.



## Lead and Copper

The Copper sampling results presented in this report were collected and analyzed in 2017. We are pleased to report there was no presence of Lead detected in any of the 52 samples drawn. The results reported showed the ECUA Water System to be in full compliance with the Lead and Copper Rule.

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. The Emerald

Coast Utilities Authority is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to two minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline or at <http://www.epa.gov/safewater/lead>.